

REMARKS

Claims 46, 47, 58, 62-65, 81 and 82 have been canceled. Claims 38-45, 48-57, 58-61 and 66-80 and new Claims 83-88 are active in the present application. Reconsideration is respectfully requested.

Claim Amendments

Claim 1 has been amended by specifying that the mineral or organic fillers or pigments are co-structured or co-absorbed by being blended in a mixing device (as described in Test No. 2, for instance). New Claims 83 and 84 find basis of support on page 6 of the specification. Further Claims 58 and 62-65 have been canceled in favor of new Claims 85-88. No new matter has been introduced into the case as a result of the amendments that have been made. Entry of the amendments is respectfully requested.

Claim Rejection, 35 USC 112

Claim 38 has been amended by deleting the questioned phrase of “supported by a gas” from the claim to indicate that the binding agent that is supported by a gas aids in the binding of the combination of mineral or organic fillers or pigments to each other. It is believed that this language clarifies the meaning of the claim. New Claims 85-88 also include this language therein.

As to Claim 50, the meaning of the phrase “macroscopically homogeneous” is simply that using the unaided eye, the composite material appears as a homogeneous material and not

one that appears to have mixed solid phases in it. Thus, the term is not believed to be indefinite and withdrawal of the rejection is respectfully requested.

Prior Art Rejection, 35 USC 102

Claims 38, 39, 42, 44-50, 55, 56, 58, 59, 71, 75, 76, 81 and 82 stand rejected based on 35 USC 103(a) as obvious over Naydowski et al U. S. Patent 5,605,568. This ground of rejection is respectfully traversed.

As stated on the record the Naydowski et al patent discloses a CaCO₃-talc coating pigment slurry consisting of (a) calcium carbonate, (b) talc, (c) water and (d) a combination of adjuvants of well known grinding aids and well known dispersants. The pigment mixture is co-ground to a medium particle size of 0.7 µm-1.3 µm. The formulation is especially useful in the coating of paper. The invention by patentees is directed to the aspect of pigment preparation by which it is known to grind a pigment combination in order to avoid the disadvantages of poor dispersibility of the talc component and inhomogeneities that result from talc agglomeration. That is, a process of grinding of pigments separately or of blending two or more pigments together by mixing and then grinding, which is the so-called co-grinding mentioned, for instance, at column 5, lines 35-38, does **not** result in the co-structuring or co-adsorption of the present claims, but rather in a very good dispersion of each of the separate pigment particles through the use of grinding and dispersing aids as disclosed in the patent. This good dispersion of the pigment types employed in the reference in any given preparation **prevents** co-structuring and aggregation of the particles.

Applicants believe the distinction between the co-structured or co-structured product of the present invention and the pigment of the patent is clearly shown in the declaration that was filed August 27, 2004. Experiment I, particular part I is consistent with the disclosure of Naydowski et al since it describes the co-grinding of CaCO_3 and talc to form a CaCO_3 /talc coating pigment slurry. The product is not a co-structured pigment as described in part II where Finnish talc is co-structured with WO in a mixer (not a grinder device) using a polyamide resin as a co-structuring agent. The SEM images of the two experiments clearly show the distinction between co-ground pigments of part I versus the (non-co-ground) co-structured pigment of part II of the invention.

Parts I and II of Experiment 2 are very similar, respectively, to parts I and II of Experiment I. The SEM photographs of this experiment show two images of the comparative co-ground pigments identified as 41082/14 of part I and the two images of the present co-structured pigments identified as 41083/06. No co-structuring of the comparative pigment mixture of part I is observed, while the pigment material of part II (invention) shows co-structuring. Further, the co-structured pigment of the invention shows a superior brightness of 91.9 % in comparison to the brightness of 91.6 % for the comparative mixture.

Part I of Experiment 4 is another comparison in which a comparative pigment (I) of TiO_2 /talc with a polyacrylic binder, which is not co-structured, is contrasted with a co-structured talc/WO pigment in which a polyamide-amine resin is used as the binder. The results in the photographs of the last page of the declaration show the significant structural difference between the two images of the comparative example and the two images of the co-

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structured pigment mixture of the invention. The reference simply does not suggest the material combinations of the present claims.

Claims 51, 60 and 77-79 stand rejected based on 35 USC 103(a) as obvious over Naydowski et al, U. S. Patent 5,605,568 in view of Andersen et al U. S. Patent 5,662,731.

This ground of rejection is respectfully traversed.

Applicants maintain their position as stated above with respect to the Naydowski et al patent as stated above.

As to the cited Andersen et al patent, the relevance of the same in a combination with Naydowski et al is not clear, and further does not appear to be relevant to the present invention. Andersen et al discloses a highly inorganically filled, fiber reinforced, organically-bound structural matrix. Normally, the matrix is prepared by employing a starch-based binder, an inorganic aggregate filler, well dispersed fibers, a mold release agent and water, and this material that can be molded into various shaped objects. Accordingly, any relevance between the moldable composition of the secondary reference and the coating pigment composition of Naydowski et al is not apparent. Further, although Andersen et al discloses both calcium carbonate and talc as inorganic aggregate materials, neither one is shown in combination together as a co-structured material. Accordingly, the obviousness ground of rejection is believed obviated and withdrawal of the rejection is respectfully requested.

Claim 61 stands rejected based on 35 USC 103(a) as obvious over Naydowski et al, U. S. Patent 5,605,568 in view of Arrington-Webb et al U. S. Patent 5,584,924. This ground of rejection is respectfully traversed.

The Arrington-Webb et al patent discloses a kaolin clay pigment which is said to have improved rheological properties and good opacifying characteristics. The material is prepared by partially reacting kaolin with calcium carbonate. A full reaction between the two materials is avoided since the product of a full reaction is a zeolite. A carboxylate polymer such as sodium polyacrylate is added to the two materials (dried) in order to minimize the viscosity of the combined (reacted) materials. Nowhere taught or suggest in the reference is a co-structuring or co-absorbed material as described and claimed in the present invention. Accordingly, the Arrington-Webb et al patent does not overcome the deficiencies of the Naydowski et al patent and withdrawal of the rejection is respectfully requested.

Applicants wish to thank the Examiner for the indication of allowable subject matter in the case. In fact, new Claims 85-88 are substitutes for Claims 58 and 62-65.

Double Patenting Rejection

Claims 38, 39, 42, 44-49, 55, 58, 71, 75, 76 and 81 stand rejected based on the judicially created doctrine of obviousness-type double patenting over Claims 1-59 of U. S. Patent 6,666,953. This ground of rejection is respectfully traversed.

Present Claims 38, 39, 42 and 44-49 are directed to a composite compound of mineral or organic fillers or pigments that are formed from a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other has at least one organophilic site, co-structured or co-adsorbed by being blended in a mixing device with at least one binding agent which binds the combination of mineral or organic fillers or pigments to each other. On the other hand, none of the claims of

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the '953 patent are directed to a composite compound of co-structured or co-absorbed fillers or pigments. Rather, Claims 1-6 are directed to an aqueous suspension comprising one or more pigments, fillers or minerals. Claim 7 is directed to the dried material of Claim 1, and not to a composite compound of fillers or pigments. Claims 8-19 are directed to a process for treating pigments, fillers or minerals, that contain natural carbonate, in aqueous suspension, with not even a hint of a co-structured or co-absorbed filler. Claims 20 and 21 are simply an aqueous suspension of a plurality of pigments, fillers or minerals that contain natural carbonate and Claim 22 is directed to the dried material of Claims 20-21. The remaining claims are directed to manufactured articles and methods of making manufactured articles, none of which even mention a co-structured or co-absorbed filler or pigment. Thus, the claims of the cited patent do not raise a question of obviousness-type double patenting. Withdrawal of the rejection is respectfully requested.

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It is now believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

A handwritten signature in black ink, appearing to read "FD Vastine", with a horizontal line extending from the end of the signature.

Frederick D. Vastine, Ph.D.
Registration No. 27,013

Customer Number
22850

(703) 413-3000
Fax #: (703) 413-2220
NFO/FDV